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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/611,769

07/01/2003

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EXAMINER

MATZEK, MATTHEW D

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

05/29/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/611,769	<b>Applicant(s)</b> ZAFIROGLU, DIMITRI PETER	
	<b>Examiner</b> MATTHEW D. MATZEK	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 2,3,6-9,11-13,15,23-25,56-64,66,68-72,74-80,82-87,89-91 and 93 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3,6-9,11-13,15,23-25,56-64,66,68-72,74-80,82-87,89-91 and 93 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/08</u>  | 6) <input type="checkbox"/> Other: _____                          |

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/7/2008 has been entered.
2. Claims 56-59 have been amended to further recite that the top surface of the fibrous face layer is substantially free of adhesive. New claim 93 has been added. The amended and new claims contain no new matter. Claims 2, 3, 6-9, 11-13, 15, 23-25, 56-64, 66, 68-72, 74-80, 82-87, 89-91 and 93 are currently active.

***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 23, 56, 58, 59, 61, 66, 68-70, 78, 82, 85, and 93 are rejected under 35 U.S.C. 102(b) as being anticipated by Sidles (US 4,888,228).

Sidles discloses a composite laminate comprising matrix bound plies having interlocked transverse fibers. Examiner equates the claimed fibrous face layer to Sidles' woven substrate (**24, 26**) and the claimed solid adhesive to the resin below said woven substrate as illustrated in Figure 2. The needle-punched nonwoven fabric with legs extending away from the top surface of the fibrous face layer and through the bottom surface of the fibrous face layer are represented by **30, 32, 34**. The adhesive layer is thermally set and at least partially penetrates into the fibrous face layer (col. 1, lines 40-49). Figure 3

illustrates that a plurality of plies may be stacked and the fibers of opposing plies are aligned so that through the curing process they become bonded to one another (col. 4, lines 50-62). The lower ply **20** illustrated in Figure 3 serves as the claimed backing layer. Claim 59 is rejected as the fibrous face layer comprises a cut woven layer (**34** of Figure 2). Claim 82 is rejected as the composite takes form with the application of heat and pressure; therefore, it is necessarily also embossable. The figures of Sidles illustrate the top portion of the fibrous face layer as being embedded in polymeric adhesive. However, Sidles teaches that only at least one side needs to be coated with binder and that when a plurality of the plies are stacked together there is binder between layers. Therefore, the top portion of the fibrous face layer is substantially free of adhesive. The woven substrate may be replaced with knit or nonwoven fabrics. The substrate layer may be made of polyester, nylon and aramid fibers (col. 3, lines 5-57). New claim 93 is rejected as Figure 3 illustrates that the legs of the fibrous face layer physically integrated into the backing layer. While the legs may not be needle punched into the backing layer the legs do become integrated with the backing layer in the same manner as if at least some of them had been needle punched into the backing layer.

***Claim Rejections - 35 USC § 103***

4. Claims 64 and 91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sidles (US 4,888,228).

Sidles fails to explicitly disclose the depth in which the adhesive layer penetrates the fibrous face layer. The relative depth in which the adhesive layer penetrates the fibrous face is a result-effective variable affecting the strength of the composite (col. 3, lines 14-

45). Consequently, absent a clear and convincing showing of unexpected results demonstrating the criticality of the impregnation depth, it would have been obvious to one of ordinary skill in the art to optimize this result-effective variable by routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

5. Claims 8, 9, 57, 60, 62, 74, 76 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sidles (US 4,888,228) as applied to claims 56, 58, 59 and 64 above, and further in view of Ladeur (EP 0 547 533). Sidles fails to teach or suggest the use of gathered fabrics in the fibrous face layer.

a. Ladeur teach a floor covering comprising a base fabric **1** (fibrous face layer) and pile fibers **2** that make up a face layer with a plurality of legs dependent said face layer (Abstract and Figures). The base or ground fabric **1** may be a nonwoven fabric. Said nonwoven may stitch-bonded or melt-blown and the nonwoven may be gathered (consolidated) (page 6). The tufted pile may be in the form of closed loops or as trimmed nap (page 8). The pile and nonwoven layers represent the claimed fibrous face layer. Below the face layer is an adhesive layer 3. Applicant requires a solid adhesive film or fabric. Examiner takes the position that the adhesive layer of Ladeur serves as a film and that the final product has a solid adhesive layer and as such meets the claimed solid adhesive film or fabric. The pile is needled through the face layer (claim 1) and has downwardly facing fiber loops with free fiber ends that extend into the adhesive layer. The gathered fabrics of Ladeur provide for the undulated gathers of claim 57. It is highly desirable that the adhesive used to bind the facing and backing layers along with said

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layers are all of the same type of polymers so that the article remains recyclable (page 5).

The consolidated fabric may be stitch-bonded with shrinkable yarns (page 6).

b. Since Sidles and Ladeur are from the same field of endeavor (i.e. fabric composites), the purpose disclosed by Ladeur would have been recognized in the pertinent art of Sidles.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention of Sidles with the fabric of Ladeur motivated by the desire to form a structurally reinforced composite as disclosed by Ladeur.

6. Claims 2, 3, 6, 7, 63, 71, 72, 75, 79, 80, 83, 84, 86, 87 and 90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sidles (US 4,888,228) as applied to claims 56, 58, 59 and 64 above, and further in view of Sissons (US 3,347,736). Sidles fails to teach or suggest a specific needling density.

a. Sissons teaches a reinforced needled pile fabric with a reinforcing woven fabric within the pile layer (col. 3, lines 35-44). Example 5 uses fibers with a denier of 3. Example 1 uses a needling density of 600 punches per square inch. Sissons uses fabric face layers that range from 6-15 ounces per square yard (203-509 gsm) a thickness of half an inch (col. 8, lines 8-15).

b. Since Sidles and Sisson are from the same field of endeavor (i.e. fabric composites), the purpose disclosed by Sisson would have been recognized in the pertinent art of Sidles.

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c. It would have been obvious to one ordinary skill in the art at the time the invention was made to have looked to the prior art to suggest a needling density that would yield a successful needled fabric composite.

7. Claims 11, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sidles (US 4,888,228) and Ladeur (EP 0 547 533) as applied to claim 57 above, and further in view of Zafiroglu et al. (US 6,269,759). The disclosures of Sidles and Ladeur are silent as to the stitch-bonded and bulked fabrics in the fibrous outer layer.

a. Zafiroglu et al. teach the creation of pile fiber carpet using stitch-bonded and bulked fabrics with a loop frequency of 12 per inch (Example 1). The stitches may be arranged to create various patterns or surface effects (col. 13, lines 1-5). The illustrated loops of Figure 5c read on the “gathered fabric” limitations as they appear to be structurally similar.

b. Since Sidles and Zafiroglu et al. are from the same field of endeavor (i.e. fabric composites), the purpose disclosed by Zafiroglu et al. would have been recognized in the pertinent art of Sidles.

c. It would have obvious at the time the invention was made to a person having ordinary skill in the art to modify the article Sidles with the fabrics of Zafiroglu et al. motivated by the creation of an aesthetically pleasing article.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sidles (US 4,888,228), Ladeur (EP 0 547 533) and Zafiroglu et al. (US 6,269,759) as applied to claim 12 above, and further in view of Murata et al. (US 4,576,840). The disclosures of Sidles, Ladeur and Zafiroglu et al. are silent as to the stitch-bonded and bulked fabrics in the fibrous outer layer.

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- a. Murata et al. teach a pile fiber composition comprising shrinkable pile fibers in the creation of a woven or knitted pile fabric.
  - b. Since Sidles and Murata et al. are from the same field of endeavor (i.e. fabric composites), the purpose disclosed by Murata et al. would have been recognized in the pertinent art of Sidles.
  - c. It would have obvious at the time the invention was made to a person having ordinary skill in the art to modify the article Sidles with a woven or knitted carpet of shrinkable fibers motivated by the use of conventional techniques within carpet making with the desire to create an article with outstanding appearance and feel (Murata et al. Abstract).
9. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sidles (US 4,888,228) as applied to claim 56 above, and further in view of Allison et al. (US 2003/0099810). Sidles fails to teach or suggest the use of a spunlaced fabric for the fabric layer, through which the fabric is needled.
- a. Allison et al. teach the creation of carpeting for vehicles that comprises a primary layer **12** that may be a spunlaced fabric [0024].
  - b. Since Sidles and Allison et al. are from the same field of endeavor (i.e. fabric composites), the purpose disclosed by Allison et al. would have been recognized in the pertinent art of Sidles.
  - c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the article of Sidles with the spunlaced fabric layer



of Allison et al. The skilled artisan would have been motivated by the desire to create an article with added stability provided by the spunlaced fabric.

***Response to Arguments***

10. Applicant's arguments filed 3/7/2008 have been fully considered but they are not persuasive.

11. Applicant argues that Examiner's position that Sidles teaches that the fibrous layer "may be" substantially free of adhesive is in conflict with the instant set of claims and as such does not serve as prior art. Examiner's previous characterization of Sidles was not meant to be construed as hypothetically possessing a fibrous layer that is substantially free of adhesive. The use of the term "may be" in the last office action was intended to convey that the fibrous outer layer is permitted to be free of adhesive. In this Office Action, Examiner has clarified his position and would like to point to the first example and claim 1 set forth in Sidles. In both instances, both sides of the uppermost substrate are covered with a fibrous outer layer, but when combined with additional layers of the applied invention only the inwardly facing fibrous layer comes in contact with adhesive and the outwardly facing fabric layer remains free of adhesive.

12. Applicant argues that Sidles is particularly concerned with getting all of the fibers substantially impregnated with adhesive. Sidles clarifies that he is interested in impregnating the fibers that are located between the plies and the adhesive is 'sandwiched' between the plies (col. 2, lines 60-65).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW D. MATZEK whose telephone number is (571)272-2423. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571.272.1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew D Matzek/  
Examiner, Art Unit 1794

/Norca L. Torres-Velazquez/  
Primary Examiner, Art Unit 1794